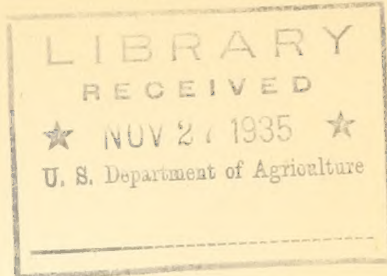


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P L A N T I N T R O D U C T I O N S

TWENTY-FOURTH

ANNUAL DESCRIPTIVE LIST

Season 1935-6

**Containing Descriptions of the More Important
Introduced Plants Now Ready
for Listed Experimenters**

**Division of Plant Exploration and Introduction
Bureau of Plant Industry
United States Department of Agriculture
Washington, D. C.**

All plants sent out by this Division to experimenters are inspected at the Plant Introduction Gardens by officers of the Bureau of Entomology and Plant Quarantine. At the time this Annual List goes to press the inspection has not been made. It is possible, therefore, that quarantine regulations may prevent the sending out of a few plants herein described.

PLANT INTRODUCTIONS.

Experimenters will please read carefully this introductory note before sending in their requests for plant material.

This, the Twenty-fourth Annual List of Plant Introductions, contains descriptions of many new and rare plants, not yet widely tested in this country. The available information concerning some of them is meager, and it is therefore impossible to speak with assurance regarding their value, their cultural requirements, and their adaptability to the various climates and soils of the United States.

These plants have been imported because it is believed some direct or indirect use can be made of them. They are first placed at the disposal of the experts engaged in plant breeding, crop acclimatization, and horticultural investigations generally in the United States Department of Agriculture and the State Experiment Stations. Some of them have been grown in sufficient quantity, however, so that they can be distributed to some private experimenters who have the facilities to test them carefully. The List is therefore sent to those who have qualified as experimenters with the Division of Plant Exploration and Introduction, and who have indicated a willingness to care for material sent them.

Accompanying this Annual List are complete Check Lists showing all plants available for distribution at the several Plant Introduction Gardens during the season 1935-6 and the Garden from which available. Applicants for material should fill out all blanks at the top of the Check List of each garden from which they request plants, place a mark to the left of the P. I. (Plant Introduction) number of each plant desired, and return the lists promptly to this Division. Items marked with an asterisk (*) are available in somewhat larger numbers, for propagating purposes, to interested nurserymen having exceptional facilities.

It should be distinctly understood that the Division does not agree to supply all the plants requested. It reserves the right to limit the number or to withhold the entire request of any experimenter in order that it may place the material according to its best judgment.

The shipping season extends, as a rule, from December first to April first. Because of the large quantity of plants which must be handled, it is difficult for the Division to single out individual requests and ship them at a certain date; where there are valid reasons, however, for requesting that material be sent at a specified time, every effort will be made to meet the requests.

These plants are placed in the hands of experimenters with the understanding that reports on their behavior will be sent to this Division from time to time. It is particularly desired that reports be sent regarding the flowering, fruiting, hardiness, utilization and other interesting features of plants which have been sent for trial; and it is expected that experimenters will at all times preserve the original labels sent with the plants, or accurate plats showing the location and P. I. number of each one. Failure to comply with these directions will be considered sufficient reason for a discontinuance of the cooperative relation.

It will be necessary for experimenters to preserve and refer to the Annual Lists of Plant Introductions or to the Inventories published by the Division, for information regarding the plants. Each Inventory lists the seeds and plants imported during a period of three months. Its object is to serve as an historical record; it is not printed immediately following the arrival of the plants, but eighteen to twenty-four months later. The edition is limited, and it cannot be supplied to all experimenters. This makes essential the preservation of the annual descriptive list as a work of reference, and the Division desires to urge upon its cooperators the importance of this step. Unless the Annual lists are preserved, the Division later will be flooded with inquiries from persons who have received plants and who desire information concerning them. Answering such inquiries involves much unnecessary labor and expense.

For convenience in using the descriptive list, after each description is given in parenthesis the name of the garden or gardens at which the plants are being grown.

Descriptive List

Numbers preceding plant names are P. I. numbers and, in correspondence concerning any plant, both number and name always must be given.

Nurserymen please see statement at end of paragraph 3 of introductory note, concerning items marked with an asterisk (*).

111228. ACACIA DENTINENS. From South Africa. Presented by Miss M. Wilman, McGregor Museum, Kimberley. Zwart Haak. An attractive shrub or small tree, armed with very short recurved prickles along the branches. The compound leaves have 3 pairs of pinnae, each composed of one pair of obliquely ovate leaflets. The small yellow flowers are in loose, sub-globose heads. For trial in the Gulf region and southern California. (Chico, Calif.)

106106. ACACIA GIRAFFAE. From the Union of South Africa. Presented by Miss M. Wilman, McGregor Museum, Kimberley. The Kameel-doorn, of the Transvaal, a valuable tree for arid regions in the warm temperate zone. The ripe pods are eaten greedily by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish-brown wood is used by the natives in making spoons, knife-handles, etc. For trial in the Gulf region and the warmer parts of the southwest. (Glenn Dale, Md.)

106603. ACACIA LAETA. From Egypt. Presented by Thos. W. Brown, Ministry of Agriculture, Giza. A small tree, armed with short, black, hooked prickles, or sometimes unarmed. The small glaucous leaves 2 to 3 inches long, consist of 2 to 3 pairs of oblique, oblong leaflets, and the flowers are in small spikes. Native to Abyssinia. The species has shown considerable hardiness in southern Florida. For trial in southern California and southern Florida. (Chico, Calif.)

104164. ACACIA SP. From Australia. Presented by F. H. Baker, Richmond. Locally known as jam-wood; the blossom has the fragrance of raspberry jam. Received as Acacia acuminata, but the seeds do not agree with that species. For trial more especially in southern California but also in the drier, warmer parts of the Gulf region. (Supply limited.) (Chico, Calif.)

106546. ACACIA SP. From South Africa. Collected at Skukusa, Krueger Park, East Transvaal, by T. and R. P. Barbour. An unidentified acacia, no description for which is available. The young seedlings have bipinnate leaves with 13 to 16 pairs of very small leaflets on a pinna. For trial in southern California and the Gulf region. (Chico, Calif.)

110285. ACANTHOPANAX TRIFOLIATUM. Araliaceae. From Swatow, China. Presented by Lingnan University, Canton, through Prof. I. J. Condit of the University of California at Los Angeles. A hardy, spiny, climbing shrub, native to western China, with slender-stemmed, 3-parted, light-green leaves, and compound terminal umbels of small greenish flowers followed by small black berries. For trial from the Ohio River southward and on the Pacific coast. (Glenn Dale, Md.)

95545. ACER BARBINERVE. Maple. From Japan. Obtained from Chugai Shokubutsu Yen, near Kobe. A shrubby tree, native to Manchuria, with coarsely toothed 5-lobed leaves. For trial from southern New York and Lake Erie southward and west of the Rocky Mountains. (Glenn Dale, Md.)

95540. *ACER CARPINIFOLIUM*. Hornbeam maple. From Japan. Obtained from the Chugai Shokubutsu Yen, Yamamoto, near Kobe. A tree up to 30 feet high with oblong sharp-pointed doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright-green hornbeamlike leaves turn bright brownish-yellow in autumn. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

90652. *ACER CAUDATUM UKURUNDUENSE*. Maple. From Manchuria. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers. A small Manchurian tree with coarsely toothed usually 5-lobed leaves, the lobes ovate, long-acuminate. The wings of the fruits are less spreading than in the type. For trial from southern New York southward, and west of the Rocky Mountains. (Glenn Dale, Md.)

85678. *ACER CISSIFOLIUM*. Maple. From Japan. Purchased from the Chugai Shokubutsu Yen, Yamamoto, near Kobe. A Japanese maple of compact rounded habit becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with leaves; the keys, about 1 inch long, occur in long racemes. In Autumn the foliage turns red and yellow. For trial in all except the warmest parts of the southern states. (Glenn Dale, Md.)

82471 and 90785. *ACER PSEUDO-SIEBOLDIANUM*. Maple. From Chosen. Presented by the Forest Experiment Station, Keijo. A small tree, native to Manchuria, with cordate leaves divided into 9 to 11 lanceolate serrate lobes, and corymbs of purple flowers. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

91243 and 96519. *ACER RUFINERVE*.* Maple. From Japan. Obtained from the Chugai Shokubutsu Yen, Yamamoto, near Kobe. A small deciduous Japanese tree with small bluish-white young shoots, and dark green irregularly serrate, 3-lobed or obscurely 5-lobed leaves. The keys are up to $\frac{3}{4}$ inch long. Occasionally the young foliage, the leaf-stalks, and the mid-ribs are red. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

91522 and 102292. *ACER RUFINERVE*. From Dairen, South Manchuria. Procured from Manshu Nosan Shokai, Inc. Same description as for P.I. No. 91243. (Glenn Dale, Md.)

91523. *ACER TSCHONOSKII*.* Maple. From Manchuria. Obtained from Manshu Nosan Shokai, Inc., Dairen. A graceful shrubby tree, sometimes 20 feet high, native to Japan. The leaves, up to 4 inches long and usually 5-lobed, turn bright yellow in the autumn. For trial from southern New York southward and west of the Rocky Mountains. (Glenn Dale, Md.)

78856. *AGAPANTHUS AFRICANUS*. African lily. From England. Obtained from Clarence Elliott, Ltd., Six Hills Nursery, Stevenage, Herts. Variety Mooreanus. A dwarf form of the type, reputed to be winter-hardy, 1½ feet high, with short straplike leaves and dark-blue flowers in fair-sized umbels. For trial from the Ohio River southward. (Glenn Dale, Md.)

102621. *AGAVE INDAGATORUM*. From West Indies. Collected on Watlings Island by the Allison V. Armour Expedition. A stemless agave with grayish lanceolate acute leaves about 7 feet long, terminated by a chestnut-brown spine half an inch long, and flowers borne in a panicle on a scape about 25 feet high. For trial only in the warmest parts of southern California and southern Florida. (Glenn Dale, Md.)

106073. ALOE PRETORIENSIS. From South Africa. Obtained from Miss M. Wilman, McGregor Museum, Kimberley. An aloe with dense rosettes of tapering leaves, usually withered at the red tips, and a stoutish stem 4 to 5 inches in diameter. The dark-brown to black stem is extremely rough and clothed throughout its entire length by the remains of withered leafstalks. The most distinctive feature of the plant is its tall branched inflorescence with dense racemes of bright-scarlet flowers. For trial indoors only except in the warmer parts of the Gulf region and in southern California. (Glenn Dale, Md.)

75953. ALOE SUCCOTRINA. From East Africa. Collected near Camp Mitchell, Mount Kenya, by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. A shrubby plant 3 feet or more high. The pale-green fleshy leaves are $1\frac{1}{2}$ to 2 feet long by 2 inches wide and have marginal spines. The yellow flowers are in a dense raceme 6 to 12 inches long, terminating in a stout, simple or branched scape 2 to 4 feet high. It is useful for pot culture and may be grown in the open where the minimum temperature is above 30°F. Propagation is by seed, or by suckers freely produced at base of plant. For trial indoors only except in frostless localities. Some of these plants are seedlings and some are grown from cuttings. (Chico, Calif.)

79473. ALOE SP. Originally from France. Obtained from Vilmorin, Andrieux & Co., Paris. Second-generation seedlings of a hybrid aloe of which one of the original parents was A. striata and the other unknown. The parent plants of the present seedlings are 18 inches high, with a 24-inch spread. The leaves are a foot long by 3 to 4 inches wide, yellowish green in color and with a bluish bloom; they are somewhat burned by full sunlight at Chico. For trial on the Pacific coast and in the Gulf region. (Chico, Calif.)

106074. ALOE SP. From South Africa. Obtained from Miss M. Wilman, McGregor Museum, Kimberley. A low fleshy species, the young plants of which have cespitose, two-ranked, rounded-triangular, dull-green leaves up to $2\frac{1}{2}$ inches long. The very short dull-red spines are scattered over the dorsal surface. For trial indoors only except in the warmer southern parts of California, Arizona, and Florida. (Glenn Dale, Md.)

106075. ALOE SP. From South Africa. Obtained from Miss M. Wilman, McGregor Museum, Kimberley. A low fleshy species, the young plants of which have cespitose, two-ranked, elongate-triangular, pale-green leaves up to $2\frac{1}{2}$ inches long, with short whitish marginal spines, and marked on the back with whitish blotches. For trial indoors only except in the warmer southern parts of California, Arizona, and Florida. (Glenn Dale, Md.)

78188. ANACAMPSEROS TELEPHIASTRUM. Portulacaceae. From South Africa. Obtained from W. & C. Gowie, Grahamstown, through Hugh Evans, Santa Monica, Calif. A succulent plant a few inches high, with thick, ovate-acute, cespitose leaves and panicles of reddish flowers. For trial indoors only except in the warmest parts of the southwest and in Southern Florida. (Glenn Dale, Md.)

103985. ARISTOLOCHIA TAGALA. From the Straits Settlements. Obtained from the Botanic Gardens, Singapore, through the Atkins Institution of the Arnold Arboretum, Cienfuegos, Cuba. A tropical climber with ovate-acuminate and deeply cordate-auriculate leaves about 4 inches long. The greenish-purple flowers with the limb extended into a tongue-shaped lip are in small racemes. Native to Luzon, Philippine Islands, and allied to Aristolochia indica. For trial in southern Florida and southern California. (Glenn Dale, Md.)

93144 and 93146. ASTER SPP. From Canada. Collected at LePas, Manitoba, by Knowles A. Ryerson, Bureau of Plant Industry, W. H. Alderman, Minnesota Agricultural Experiment Station, and W. R. Leslie, Supt. Experiment Station, Morden, Manitoba.

93144. ASTER LINDLEYANUS.* Lindley aster. A perennial aster up to 6 feet high, with rather thick, sharply serrate, ovate leaves 2 to 4 inches long, and loose panicles of blue or violet flower heads 1 inch across. It is native to the northern part of North America. This is reported as an early summer-blooming strain with purple flowers. In Maryland it flowered from early to late August. For trial throughout the northern states. (Glenn Dale, Md.)

93146. ASTER PANICULATUS.* A perennial, paniculately branched aster 2 to 8 feet high, with lanceolate to linear, serrate leaves 3 to 6 inches long. The numerous flower heads, which appear from August to October, are 1 inch across and are usually white or tinged with violet. It is native to the northern part of North America. This is a strain with pink flowers. For trial in the northern states. (Glenn Dale, Md.)

93151. ASTER PANICULATUS.* A pinkish strain but differing slightly from the preceding (P.I. No. 93146.) For trial in the northern states. (Glenn Dale, Md.)

105051-2-3-4. ASTER SPP.* From England. Obtained from Ernest Ballard, Old Court, Colwell, near Malvern.

105051. Aster. Little Boy Blue. An early-blooming very dwarf aster that forms little compact pyramids, completely covered with semi-double deep-blue flowers. This and the succeeding three items are of interest primarily because of their very dwarf habit. (Glenn Dale, Md.)

105052. Aster. Little Pink Lady. A very dwarf, bushy variety with large semi-double deep-pink flowers. For trial in the northern states. (Glenn Dale, Md.)

105053. Aster. Purple Emperor. An early blooming, very dwarf variety with numerous large semi-double flowers of a beautiful rich purple. The buds are very dark and the stems are black-purple. For trial in the northern states. (Glenn Dale, Md.)

105054. Aster. Snow Sprite. A type of Novi-belgii aster. It has a very dwarf branching habit and flowers freely when only 1 foot high. The foliage is dark green and the semi-double white flowers, produced in profusion down to the ground, appear in mid-season. For trial in the northern states. (Glenn Dale, Md.)

105591. BENZOIN SP. Spicebush. From China. Collected in Kwangsi Province, at 1,500 feet altitude, by Albert N. Steward and H. C. Cheo, University of Nanking. A moderate-sized tree with globose black fruits about two-fifths of an inch in diameter. For trial in the Gulf region and the milder parts of the Pacific coast. (Glenn Dale, Md.)

102740. *BETULA JAPONICA MANDSHURICA*. Birch. From Manchuria. Obtained from Manshu Nosan Shokai, Inc., Dairen. A white-barked birch up to 80 feet high with the leaves often broadly wedge-shaped at the base. Native to Hopeh Province, China. For trial in the upper South and in the milder parts of the northern states. (Glenn Dale, Md.)

104903. *BETULA JAPONICA SZECHUANICA*. Japanese white birch. From France. Presented by Vilmorin-Andrieux & Co., Paris. A tree up to 60 feet high, native to western China. The rhombic-ovate leaves, 2 to 3 inches long, are unequally dentate-serrate, and are densely glandular-punctate beneath. The dark dull-green color of the leaves persists until late autumn. For trial in the upper South and in the milder parts of the northern states. (Glenn Dale, Md.)

104907. *BETULA TRISTIS*. Birch. From France. Presented by Vilmorin-Andrieux & Co., Paris. A shrub 3 to 12 feet high, with broadly ovate or elliptic acuminate leaves 2 inches long. Native to northeastern Asia. For trial in the northern states. (Supply very limited.) (Glenn Dale, Md.)

66282. *BUXUS HARLANDII*.* Box. From England. Presented by the Aldenham House Gardens, Elstree, Herts. This Chinese species is almost as slow in growth as the dwarf box commonly used for edgings. It differs from this chiefly in its longer leaves, often $1\frac{1}{4}$ inches long, on vigorous shoots, and its tendency to form rather broad, flat-topped bushes. The species suffers from winter-killing near Washington, D. C., but has shown much promise in milder regions and especially in rather dry situations. For trial in the southern states and California. (Glenn Dale, Md.)

79509. *BUXUS HARLANDII*.* From England. Procured from Hillyer & Son, Winchester. Same description as for P. I. No. 66282. (Glenn Dale, Md.)

105592. *CALLICARPA RUBELLA*.* Beautyberry. From China. Collected at 1,100 feet altitude in Kwangsi Province, by Albert N. Steward and H. C. Cheo, University of Nanking. Native name, Tze chu. A shrub or small tree up to 20 feet high, native to India and China. The obovate tomentose leaves are 5 inches long, and the small pink flowers, in axillary cymes, are followed by purple berries. For trial in the Gulf region and in the milder parts of the Pacific coast. (Glenn Dale, Md.)

98140. *CALLICARPA SP.** From England. Obtained from Aldenham House Gardens, Elstree, Herts. (Received under the specific name koreana, for which no published description has been found.) It may be identical with Callicarpa japonica, which is a shrub 2 to 5 feet high with opposite, elliptic or ovate-lanceolate, long acuminate, serrulate leaves, wedge-shaped at the base, and conspicuous purple fruits. The small pink or whitish flowers are in axillary cymes. For trial from southern New York and Ohio southward and west of the Rocky Mountains. (Glenn Dale, Md.)

67069. *CALOTHAMNUS ASPER*. Myrtaceae. From Blackwood, South Australia. Presented by Edwin Ashby. A hairy shrub, with crowded, linear, flat leaves, and short dense clusters of flowers with crimson stamens. Native to Western Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

64478. *CALOTHAMNUS CHRYSANTHERUS*. From Blackwood, South Australia. Presented by W. L. Wheeler, through Edwin Ashby. A rather small erect shrub, native to Western Australia, with thick corky branches, and thick, terete, sharp-pointed leaves 2 to 4 inches long. The chief beauty of the shrub lies in the bundles of deep-red stamens which protrude an inch or more from the yellowish flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

77176. *CARMICHAELIA ARBOREA*.* From Wanganui, New Zealand. Presented by the Town Clerk, Wanganui City Council. A New Zealand leguminous shrub up to 9 feet high, somewhat resembling Scotch broom but with thin flat green branches taking the place of leaves. The clusters of small pea-like lilac-striped flowers are followed by small black pods the sides of which drop off and expose the bright-red seeds surrounded by the dark margin of the pod. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

90849. *CARMICHAELIA EXSUL*. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. A low-growing leguminous shrub with flattened branchlets, compound leaves made up of 3 to 5 obovate, emarginate leaflets nearly 1 inch long, and axillary peduncles bearing 1 or 2 yellowish white flowers. It is native to Lord Howe Island. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

77177. *CARMICHAELIA ODORATA*. From Wanganui, New Zealand. Presented by the Town Clerk, Wanganui City Council. A much-branched New Zealand shrub, related to the brooms, 3 to 10 feet high, leafy in the spring and summer. The slender erect racemes of purple flowers are borne on pendulous branches. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

103491. *CARISSA SPINARUM*. From India. Collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude, by Dr. Walter Koelz, and presented by the University of Michigan. A spiny suberect evergreen shrub 6 feet high, native to the lower slopes of the Himalayas, with elliptic-ovate leathery leaves 1 to 2 inches long and white tubular fragrant flowers, $\frac{1}{2}$ inch long, in dense terminal cymes. The subglobose black fruits are $\frac{1}{4}$ inch in diameter and are said to be edible. In India the shrub is said to be eaten greedily by sheep and goats and to survive under such browsing even in poor rocky soils. It is grown as an individual ornamental and also as a hedge, trimmed. For trial in the warmer parts of the Gulf region and southern California. (Glenn Dale, Md.)

62408. *CHRYSANTHEMUM MORIFOLIUM*. From China. Collected in the Western Hills between Ming Tombs and the Fa Huassu Temple, by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. A low herbaceous plant with basal tufts of evergreen foliage and widely branched 2-foot stalks of small pink to white single flowers from September until frost. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

105699. *CIPADESSA SP.* From China. Collected at 6,000 feet altitude in Kwangsi Province by A. N. Steward, University of Nanking. A small tree with pinnate leaves resembling those of the genus *Melia*, to which it is related. It bears globose black fruits. For trial in the Gulf states and on the Pacific coast. (Glenn Dale, Md.)

72790. *CISTUS CORBARIENSIS*. Cistaceae. Rockrose. From Kew, England. Presented by the Director, Royal Botanic Gardens. A white-flowered shrub 2 feet high, native to Spain. For trial in the southern states. (Chico, Calif.)

76013. *CLEMATIS ARMANDI*. Armand clematis. From France. Purchased from Vilmorin-Andrieux & Co., Paris. An ornamental Chinese vine with fragrant white flowers. It is characterized by the abundance and the persistence of its foliage. For trial in the southern states and on the Pacific coast. (Chico, Calif.)

80394. *COTONEASTER HARROVIANA*. From India. Obtained from Hooghly District, Bengal, through the American Consul at Calcutta. An evergreen shrub, native to Yunnan, China, about 6 feet high, of a loose spreading habit, with small, shining, dark-green, silky-tipped leaves, dense corymbs of white flowers, and small red fruits. For trial in the middle and lower south and on the Pacific coast. (Glenn Dale, Md.)

39585. *CRATAEGUS LAUTA*. From Jamaica Plain, Mass. Obtained from the Arnold Arboretum. As originally described, from the parks of Boston where it was growing, the plant was a spiny arborescent shrub. At Chico, Calif., it has grown to a tree 25 feet high, of rather upright habit and with a globular top. The dark-green ovate serrate leaves are shallowly lobed and the abundant ovoid orange-red fruits, $\frac{3}{4}$ inch long, are borne in clusters of five to ten. For trial in the northern states. (Chico, Calif.)

111044. *CYNOGLOSSUM FURCATUM*. Boraginaceae. From India. From the Lloyd Botanic Garden, Darjeeling. An herbaceous perennial, native to India. The plants have several stems from a rosette of lanceolate, soft-haired entire leaves. The small blue flowers are borne in long slender clusters similar to those of the forget-me-not. For trial in the warmer parts of the Gulf region and the Southwest. (Glenn Dale, Md.)

104077. *CYTISUS PROLIFERUS*. Tagasaste. From Africa. Presented by the Director, Government Experimental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. A stout leguminous shrub, up to 12 feet high, of rather lax habit, with long slender branches and green trifoliate leaves with silky pubescent lower surfaces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands, where it is considered an excellent drought-resistant forage plant. For trial in California and in the southern states. (Chico, Calif.)

101279. *DIANELLA INTERMEDIA*. Liliaceae. From New Zealand. Purchased from A. Wilkinson, Tauranga. A perennial herb, native to New Zealand, with numerous sword-shaped leaves 3 feet long forming a rosette at the base of a scape 2 feet high. The spreading panicle of small purplish flowers with bright-orange anthers is followed by broadly oblong blue berries nearly an inch in length. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

99295-6-7. *DIANTHUS WINTERI*. Pink. From England. Obtained from Gibson & Amos (Ltd.), Cranleigh, Surrey. Varieties of a hybrid strain of garden pink, resembling *Dianthus plumarius* but with larger flowers and somewhat larger, bluer foliage. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

99295.* Meg Gardner. A rather upright-growing early variety with white flowers having a crimson center.

99296.* Mrs. Back. A variety less upright than the preceding, having white flowers with crimson-purple centers and with the outer margins of the petals lacinated.

99297.* Mrs. Wormald. A variety similar in growth and habit to Mrs. Back, but with pink flowers having a crimson center.

81154. ECHEVERIA AMOENA. Crassulaceae. From Ventimiglia, Italy. Presented by S.W. McLeod Braggins, Superintendent, La Mortola. A nearly stemless succulent with small dense rosettes of thick leaves and slender scapes 4 to 8 inches high, bearing 1 to 8 red flowers in racemes. Native to Mexico. For trial in southern California and southern Florida. (Chico, Calif.)

103406. EHRETIA ELLIPTICA.* Boraginaceae. From Texas. Presented by Peter H. Heinz, Brownsville. Mexican names, Anagua and Manzanillo. An ornamental shrub or tree up to 50 feet high, native to western Texas and northern Mexico. The thick oblong leaves are 1 to 4 inches long and as rough as sandpaper. The small white fragrant flowers are borne profusely and are followed by sweet edible yellow fruits about $\frac{1}{4}$ inch in diameter. The wood is used for tool handles and wheel spokes. In southern Texas young trees are used for lawn planting. For trial in the southwest and the Gulf region. (Chico, Calif.)

101915. ELEUTHERINE PALMIFOLIA. Iridaceae. From the Philippine Islands. Presented by Dr. W. Dwight Pierce. A shade-loving tropical irislike plant with one or two linear-lanceolate leaves one to one and a half feet long, and white flowers an inch across, with bright yellow centers, borne on a scape 6 to 9 inches high. The flowers open in the early evening, for only about an hour. Native to the American Tropics and naturalized in the Philippines. (Glenn Dale, Md.)

111046. ERIGERON SP.* Asteraceae. From India. Presented by the Lloyd Botanic Garden, Darjeeling. An unidentified species of Erigeron from the eastern Himalayas. The plants of this genus usually resemble the asters but ordinarily they flower much earlier. Some are used as hardy border plants. For trial in all except the warmer parts of the United States. (Glenn Dale, Md.)

104079. ERIOSEMA MONTANUM. From Africa. Presented by the Director, Government Experimental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. An erect perennial leguminous plant with trifoliolate leaves; the ovate-oblong acute leaflets are about 2 inches long. The small yellow flowers are in axillary racemes. Native to eastern and northeastern Africa. For trial in the warmer parts of southern California and southern Florida. (Chico, Calif.)

91818. ESCALLONIA PUNCTATA.* From Scotland. Presented by the Royal Botanic Garden, Edinburgh. An evergreen shrub, 4 to 5 feet high, with neat evergreen foliage, and bright-red flowers which are distinct from all other escallonias. Native to Chile and now rarely cultivated. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

104373. *ESCALLONIA RUBRA*.* From Scotland. Presented by the Royal Botanic Garden, Edinburgh. A prostrate evergreen shrub with foliage similar to that of *Escallonia macrantha*, and large rose-red flowers. Native to Chile. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

95516. *EUCALYPTUS ALGERIENSIS*.* From Algeria. Presented by Dr. R. Maire, University of Algiers. A hybrid between *Eucalyptus rostrata* and *E. rudis*, which has become naturalized in North Africa and now covers considerable areas of the hills around Algiers. It differs from *E. rudis* by its smooth trunk, its small flowers with the hemispherical operculum not beaked, and from *E. rostrata*, by its buds which are white like those of *E. rudis*. In California it flowers in October, between the flowering periods of the parents. The tree is a rapid grower, endures several degrees of frost, and is reported to be one of the best eucalypts for localities in which the winters are dry and mild. For trial in the southern parts of California and Arizona and in the warmer and drier parts of the Gulf region. (Chico, Calif.)

106335. *EUCALYPTUS DIVERSICOLOR*. Karri gum. From Australia. Obtained from F. H. Baker, Richmond. A tall tree, up to 350 feet in height, native to western Australia. It is straight in habit and fairly rapid grower. The very dense and elastic wood is considered superior timber, being used by wheelwrights and for shipbuilding. In Florida the tree is said to do best near the coast, in noncalcareous soils. It is somewhat frost resistant, but it does not endure dry heat. For trial near the coast in southern California and in the milder parts of central and southern Florida. (Chico, Calif.)

104167 and 106339. *EUCALYPTUS LEHMANNI*.* Lehmann gum. Received from F. H. Baker, Richmond, Australia. A drought-resistant large shrub or small tree with rough reddish bark peeling off in irregular sheets. The greenish-yellow flowers open from July to September. Native to Western Australia. For trial in the milder parts of the southwest and in southern Florida. (Chico, Calif.)

106341. *EUCALYPTUS MICROCORYS*. Tallow-wood. From Australia. Obtained from F. H. Baker, Richmond. A tall tree with persistent furrowed fibrous bark and usually ovate-lanceolate acuminate leaves 3 to 4 inches long. The fruits are obovoid-oblong and scarcely one-sixth inch in diameter. The young trees are rapid growers but they do not thrive under dry conditions. For trial in the moister localities of southern California and in southern Florida. (Chico, Calif.)

104168. *EUCALYPTUS TORQUATA*. From Australia. Presented by F. H. Baker, Richmond. A tree with lanceolate, oblique, leathery, dull gray-green leaves 4 inches long, and reddish-orange flowers in umbels of seven on a stalk 1 inch long. Native to Western Australia. For trial in southern California. (Supply very limited.) (Chico, Calif.)

103776. *EUONYMUS JAPONICUS*. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, in Heibya Park, Tokyo. This form is a tree 20 feet high, the fruits of which are said to be 1- to 2-seeded, reddish in color, and borne on rather stiff stems that stand up among the leaves. For trial from Washington, D. C., and Tennessee southward and on the Pacific coast. (Glenn Dale, Md.)

67798. *FATSHEDERA LIZEI*.* Araliaceae. From Paris, France. Plants presented by Vilmorin-Andrieux & Co. A supposed hybrid between *Fatsia japonica moseri*, a compact, Japanese shrub with shining leaves, and *Hedera helix hibernica*, a large-leaved Irish variety of English ivy, forming erect shrubby evergreen plants with leaves intermediate between the parents in size and lobing. The plant probably will withstand temperatures down to about zero F. without protection. For trial from Philadelphia southward and in California. (Glenn Dale, Md.)

103931. *FEROCACTUS LATISPINUS*. From Cuba. Presented by the Atkins Institution of the Arnold Arboretum, Cienfuegos. A stout globular cactus about a foot high with 10 to 15 white to pink spines arising from each areole. Of these spines the 4 or 5 central ones are much stouter, with one much flattened and hooked. The campanulate flowers, about 1 inch long are rose purple. It is native to Mexico and was collected there by Prof. Juan Balme, botanical explorer. For indoor culture only except in the southern parts of California, Arizona, and Florida. (Glenn Dale, Md.)

103740. *FEROCACTUS WISLIZENI*. Presented by the Boyce Thompson Southwestern Arboretum, Superior, Arizona. A large, globular or cylindrical cactus, becoming several feet high with age. The ribs often number 25, and the strongly hooked, white or red spines are 1 to 2 inches long. The yellow or reddish flowers are about 2 inches long, followed by oblong yellow fruits 2 inches in length. Native to northwestern Mexico. For trial in the milder parts of the southwest and in the Gulf region. (Glenn Dale, Md.)

103504. *FICUS* SP. From India. Collected at Bhadwar, Punjab, at 2,000 feet altitude, by Dr. Walter Koelz, University of Michigan. A large attractive tree with late-ripening yellow fruits up to 3 inches long, rather insipid, with few seeds and with the odor of peaches. For trial in southern Florida and southern California. (Glenn Dale, Md.)

107723. *FORSYTHIA EUROPAEA*. From Yugoslavia. Collected by Dr. Edgar Anderson, Balkan Expedition of the Arnold Arboretum. An upright shrub 6 feet high, with ovate to ovate-lanceolate leaves 2 to 3 inches long, and golden-yellow flowers about one inch long. Native to Albania. The seeds from which these plants are grown came from an unusually cold and dry region. (Glenn Dale, Md.)

90790. *FORSYTHIA OVATA*. From Japan. Presented by the Director, Forest Experiment Station, Keijo, Chosen. A shrub about 6 feet high with spreading branches, yellowish-gray branchlets, ovate serrate, or nearly entire leaves, 2 to 3 inches long, and amber-yellow flowers, 1 inch long, which appear very early in the spring. It is native to Chosen. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

82477 and 104143. *FORSYTHIA VIRIDISSIMA KOREANA*.* From Chosen. Presented by the Director, Forest Experiment Station, Keijo. An upright shrub, under 10 feet high, with more or less spreading branches. The leaves are 2 to 5 inches long, elliptic-ovate to oblong-lanceolate, broadest below the middle, and usually serrate beyond the middle but sometimes entire. The flowers are bright yellow, with the calyx more than half the length of the corolla tube. This shrub is said to be about as showy as *Forsythia suspensa*. For trial in all except the coldest parts of the northern states, in the upper South, and on the Pacific coast. (Glenn Dale, Md.)

109409. *FRAXINUS HOLOTRICHA*. Ash. From Roumania. Collected in the Danube Delta by Dr. Edgar Anderson, of the Arnold Arboretum. A small tree of unknown origin, first observed in cultivation in Germany. The leaves, 6 to 10 inches long, are composed of 9 to 13 leaflets. The young branchlets, leaf-stalks, and both surfaces of the leaves are clothed with a dense soft down. For trial especially in the drier cold regions of the United States. (Supply very limited.) (Glenn Dale, Md.)

65014. *FUCHSIA CORYMBIFLORA*. From the Mediterranean region. Collected by David Fairchild, agricultural explorer. A handsome, Peruvian fuchsia with large, serrate, acuminate leaves and deep-red flowers. The plant becomes tall but requires support in order to attain full height, and it is therefore adapted for pillars or pergolas in the warmest parts of the United States. (Chico, Calif.)

101949. *FUCHSIA MICROPHYLLA*.* From Scotland. Presented by the Royal Botanic Garden, Edinburgh. (Received under the specific name codringtonii, for which no published description has been found, and which probably is an error for Coderinghami, a garden form of *F. microphylla*.) A shrubby hybrid fuchsia about 18 inches high, with small, oval, pale-green, acute leaves less than an inch long; and very small, deep rose-red, trumpet-shaped, pendulous flowers borne freely in the summer. For trial as a greenhouse plant or for outdoor culture in summer. (Glenn Dale, Md.)

100980. *GLAUCOTHEA ARMATA*. Blue palm. From Baja California, Mexico. Obtained from Howard E. Gates, Anaheim, Calif. A stout fan-palm with a robust trunk up to 8 feet in diameter and 20 feet high, crowned by numerous glaucous-blue leaves nearly circular in outline and deeply cut into many segments. The flowers are dull purple. For trial in central and southern Florida and southern California. (Supply very limited.) (Chico, Calif.)

97292. *GLOTTIPHYLLUM DEPRESSUM*. Aizoaceae. From Africa. Presented by C. Starke & Co., Ltd., Mowbray, Capetown, through Mrs. C. I. DeBevoise, Greens Farms, Conn. A stemless prostrate succulent, native to southern Africa, with narrow tongue-shaped, recurved-depressed acute leaves, and large solitary yellow flowers with recurved petals, on a short peduncle. For trial indoors except in the Gulf region and the warmest parts of the southwest. (Glenn Dale, Md.)

97293. *GLOTTIPHYLLUM SP.* From Africa. Presented by C. Starke & Co., Ltd., Mowbray, Capetown, through Mrs. C. I. DeBevoise, Greens Farms, Conn. A stemless prostrate succulent, native to southern Africa, similar to Glottiphyllum depressum in vegetative characters but with leaves nearly twice as broad and thick. For trial indoors only except in the Gulf region and the warmest parts of the Southwest. (Glenn Dale, Md.)

78216. *HAWORTHIA ANGUSTIFOLIA*. From South Africa. Obtained from W. and C. Gowie, Grahamstown, through Hugh Evans, Santa Monica, Calif. A low succulent plant with a very short stem and a rosette of about 20 ascending, lanceolate, acuminate, pale-green leaves 1 to 2 inches long, flat on the face, convex on the back. The small whitish flowers are in a lax, few-flowered raceme on a slender peduncle about 6 inches long. For trial indoors only except in southern California and southern Florida. (Glenn Dale, Md.)

103008. *HEBE FORMOSA*.* Scrophulariaceae. From New Zealand. Presented by A. Wilkinson, Tauranga. A glabrous evergreen shrub 2 to 4 feet high, native to Tasmania. The thick lanceolate entire leaves are about half an inch long and the pale-lilac flowers are borne in short racemes in the axils of the upper leaves. For trial in the milder parts of the south and on the Pacific coast. (Glenn Dale, Md.)

103009. *HEBE VENUSTULA*.* From New Zealand. Presented by A. Wilkinson, Tauranga. A small compact shrub 6 to 9 inches high. The oblong-ovate leathery leaves, less than 1 inch long, are close-set on the branches and the small white flowers are in terminal much-branched racemes. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

89357. *HEBE SP.** From New Zealand. Procured from Duncan & Davies, Ltd., New Plymouth. (Received under the specific name *anetida*, for which no published description has been found and which was wrongly placed in the genus *Veronica*.) The plant is an attractive small shrub, branching at and above the base. The closely 4-ranked, sessile, dark-green leaves are ovate acute and one-third inch long. For trial in southern states and on the Pacific coast. (Glenn Dale, Md.)

97993. *HEDERA HELIX CONGLOMERATA*.* English ivy. From the Netherlands. Obtained from B. Ruys, Ltd., Royal Moerheim Nurseries, Dedemsvaart. A slow-growing dwarf shrub with the tops lopping over and with small, crowded, entire or 3-lobed, undulate leaves. For trial throughout the cooler parts of the United States. (Glenn Dale, Md.)

97294. *HEREROA SP.* Aizoaceae. From South Africa. Presented by C. Starke & Co., Ltd., Capetown, through Mrs. C. I. DeBevoise, Greens Farms, Conn. (Received under the specific name *stanleyi*, for which no published description has been found.) The plant is small leafless succulent with opposite, terete, fleshy branches, those arising from near the base being rebranched. It is said to bear an abundance of yellow flowers. For trial in the warmer parts of southern California and the Gulf region. (Glenn Dale, Md.)

110492. *HETEROPAPPUS HISPIDUS*.* From Manchuria. Collected by B. W. Skvortzow, Harbin. A hardy biennial with linear acute pubescent leaves, bearing large terminal heads of azure-blue asterlike flowers in summer. Native to Japan and Mongolia. For trial throughout the northern states and in the upper South. (Glenn Dale, Md.)

91518. *ILEX LATIFOLIA*. Holly. From Japan. Obtained from the Yokohama Nursery Co., Yokohama. A Japanese evergreen holly, one of the most attractive of the genus, which sometimes develops into a tree 60 feet tall. The glossy green leaves, 3 to 7 inches long, are oval or narrowly oblong, and the red berries, about one-third of an inch in diameter, are produced in dense clusters. Probably hardy as far north as Philadelphia and the Ohio River. (Chico, Calif.)

105222. *ILEX PARAGUARIENSIS*. Yerba mate, or Paraguay tea. From Argentina. Presented by the Director, Estacion Experimental Central, Pargamino, through the Pan American Union. A small tree, from the specially prepared leaves of which the popular South American drink *mate* is made; in many sections it largely takes the place of both tea and coffee. Its stimulating effect is due to small quantities of caffeine present; unlike tea, the leaves contain but little tannin. The tree withstands a few degrees of frost without injury but when very young should be protected in frosty weather. For trial in the milder parts of Florida and southern California. (Supply limited.) (Glenn Dale, Md.)

102299. *ILEX PEDUNCULOSA*.* Longstalk holly. From Manchuria. Obtained from Manshu Nosan Shokai, Inc., Dairen. An evergreen shrub or small tree up to 30 feet high, native to Japan. The ovate entire leaves, 1 to 3 inches long, are lustrous green above, and the small flowers, in slender-stemmed cymes, are followed by bright-red fruits one-fourth inch in diameter, on slender pedicels 1 inch long. For trial from Philadelphia southward and in the Pacific coast states. (Glenn Dale, Md.)

102300. *ILEX ROTUNDA*. Holly. From Manchuria. Obtained from Manshu Nosan Shokai, Inc., Dairen. A large evergreen tree, sometimes 40 feet or more high, with glossy green entire, elliptic or oblong leaves 2 - 4 inches long, and small globose scarlet berries. Native to Japan and Chosen. For trial in the southern states. (Glenn Dale, Md.)

102301. *ILEX SUGEROKI*.* Holly. From Manchuria. Obtained from Manshu Nosan Shokai, Inc., Dairen. A dense evergreen shrub 6 feet high with pubescent branchlets, elliptic-acute leaves 1 to 2 inches long, serrate above the middle, and solitary fruits about one-third of an inch in diameter on pedicels 1 inch long. It is native to Japan. Probably hardy as far north as southern Ohio. (Glenn Dale, Md.)

112222. *ILEX SP.* From China. Collected in Kwangsi Province by A. N. Steward, University of Nanking. An unidentified species of holly, the young plants of which have cuneate, elliptic-lanceolate to oblanceolate, shortly acuminate, serrulate leaves. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

105890. *JASMINUM SP.* From India. Collected at Bathad, Kulu, by Dr. Walter Koelz, University of Michigan. A vine with pinnately divided leaves much resembling those of *Jasminum officinale*. The flowers are said to be white and very fragrant and to be borne throughout the summer. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

41679. *KOELREUTERIA BIPINNATA*.* Goldenrain-tree. From Taiwan (Formosa). Presented by the Chief, Bureau of Productive Industry. A rather handsome tree up to 60 feet high, with bipinnate leaves having ovate to oblong, serrate leaflets $1\frac{1}{2}$ to 4 inches long. The bladdery capsules are globose-ovoid. Native to western China. For trial in the southern states and on the Pacific coast. (Chico, Calif.)

90663. *LARIX DAHURICA*. Dahurian larch. From Manchuria. Obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, from the Forestry Department of the Agricultural Experiment Station, South Manchuria Railway. A tree which grows to 100 feet in height, with long horizontal branches, reddish or yellowish branchlets, bright-green flattened leaves, and ovoid cones an inch long. For trial in the northern states. (Glenn Dale, Md.)

97946. *LARIX DAHURICA*.* Dahurian larch. From Chosen, Japan. Presented by The Forest Experiment Station, Keijo. Received as variety *koreana*. Similar to preceding (P. I. No. 90663). (Glenn Dale, Md.)

110270. *LAWSONIA INERMIS*.* Henna. Received from Dr. Hamilton P. Traub, Bureau of Plant Industry, Orlando, Florida. A rapid-growing, ornamental, evergreen shrub, 6 feet high, with glaucous leaves and small yellowish flowers produced in large showy panicles. The flowers exhale a strong fragrance, especially at night, and contain a volatile oil used in perfumery. A dye is made from the leaves and young branches. Recommended for hedges. For trial in Florida and southern California. (Glenn Dale, Md.)

101282. *LEPTOPTERIS SUPERBA*. Fern. From New Zealand. Obtained from A. Wilkinson, Tauranga. A handsome fern with a stout rhizome forming an erect stem 1 to 3 feet high. The filmy, finely-divided leaves are 2 to 4 feet long and broadly lanceolate in outline. For greenhouse trial, also for outdoor trial especially in the Pacific Northwest; it may prove adapted to some parts of the southern states. (Supply limited.) (Glenn Dale, Md.)

89315. *LEPTOSPERMUM ERICOIDES*. Myrtaceae. From New Zealand. Obtained from Duncan & Davies, Ltd., New Plymouth. An evergreen shrub or tree, at times a large tree, with loose papery bark and slender branchlets. The narrowly lanceolate leaves are but half an inch long, and the small white axillary flowers are usually produced in great profusion. For trial in the south Atlantic and Gulf regions and on the Pacific coast. (Glenn Dale, Md.)

105611. *LIQUIDAMBAR FORMOSANA*. Formosa sweetgum. From China. Collected in a valley at 1,100 feet altitude in Kwangsi Province by A. N. Steward and H. C. Cheo, University of Nanking. A handsome tree up to 100 feet high with a straight trunk, a much-branched head, and frequently with buttressed roots. The leaves turn to chestnut brown or red in the autumn and are retained late into the winter. For trial in the South and on the Pacific coast.

82105. *LIRIOPE GRAMINIFOLIA*.* Snakebeard. From Chosen. Collected in the Imperial Botanical Garden, Keijo, by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. It grows about a foot high, with grasslike leaves and purple to whitish flowers half an inch across in racemes arising from scapes which appear through the leaves. It is used in place of grass in situations where dense shade and shallow rooting of trees prevent the satisfactory growth of grass. For trial in the upper South and all except the coldest parts of the northern states. (Glenn Dale, Md.)

105895. *LONICERA BICOLOR*. From India. Collected at 10,000 feet altitude, at Sungnam, Rampur, Bashahr, by Dr. W. Koelz, University of Michigan. A small much-branched shrub with small, elliptic-orbicular leaves, green and slightly hairy above, glaucous green and more hairy beneath. The orange-red flowers are borne in pairs toward the ends of the branchlets. It is closely allied to *Lonicera hypoleuca*. Native to the Himalayas. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

22982. *LOROPETALUM CHINENSE*.* From China. Collected at Soochow, Kiangsu, by the late F. N. Meyer. Native name, Cho mei. An ornamental evergreen shrub, allied to the witch-hazel, sometimes growing into a small tree. It bears elliptical to ovate dark green leaves about 1½ inches long and in early spring is covered with delightfully fragrant white flowers having slender strap-shaped petals half an inch long. It may be grown in a cool greenhouse, as well as out-of-doors where the winters are not too severe. For pot culture a soil containing peat and sand is best. For trial out-of-doors from Philadelphia southward to the Gulf and on the Pacific coast. (Glenn Dale, Md.)

78148. *LOROPETALUM CHINENSE*.* From Nancy, France. Obtained from V. Lemoine & Son. Same description as for preceding (P. I. No. 22982) except that the leaves are usually ovate with acute tips, and slightly longer, and the petals of the flowers are even more slender than in the preceding. (Glenn Dale, Md.)

105897. MEIBOMIA SP. From India. Collected at Chaura, Rampur, Bashahr, by Dr. Walter Koelz, University of Michigan. A leguminous shrub 8 feet high, with small pea-like pink flowers in copious racemes, found in damp situations in semi-shade. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

103505. MORUS SP. Mulberry. From India. Collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude by Dr. Walter Koelz, University of Michigan. A large well-formed tree with red fruits, larger and later than the common mulberry. The leaves of the young plants are very similar in character to those of Morus acidosa, which is a tree reported to grow 25 feet high. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

105706. MORUS SP. Mulberry. From China. Collected in Kwangsi Province, at 300 feet altitude, by A. N. Steward and H. C. Cheo, University of Nanking. A large tree with red globose fruits over an inch in diameter. The leaves of the young plants resemble those of Morus rubra. For trial in all except the warmest and coldest parts of the United States. (Supply limited.) (Glenn Dale, Md.)

103386. NEPETA GRANDIFLORA. Menthaceae. From the U. S. S. R. Presented by the Botanic Garden, Leningrad. An attractive, nearly glabrous perennial 1 to 3 feet high, native to the Caucasus region. The heart-shaped leaves are crenate and the two-lipped flowers are violet and blue. For trial throughout the northern states. (Glenn Dale, Md.)

110048. OENOTHERA TETRAPTERA. Evening-primrose. From Colombia. Collected by Dr. W. A. Archer, Bureau of Plant Industry. An ornamental plant a foot high, with deeply cut leaves and flowers an inch across that open white in the morning and later turn pink. The fruits are top-shaped and 4-winged. Of possible use in rock gardens. For trial in the South and on the Pacific coast. (Glenn Dale, Md.)

103934. OPUNTIA STREPTACANTHA. Pricklypear. From Cuba. Presented by the Atkins Institution of the Arnold Arboretum, Cienfuegos. A much-branched cactus, sometimes 15 feet high with a trunk 18 inches in diameter. The dark-green obovate to orbicular joints, about a foot long are covered with numerous white spines. The orange-yellow flowers, 3 inches across, are followed by dull-red, globular fruits about 2 inches in diameter. Native to central Mexico, where it was collected by Prof. Juan Balme, botanical explorer. For indoor culture only except in southern California and southern Florida. (Very few plants available.) (Glenn Dale, Md.)

99963 OSBECKIA CAPITATA.* Melastomaceae. From China. Collected by the Forrest Expedition to southwestern China and presented by Maj. Lionel de Rothschild, London, England. An ornamental, much-branched, perennial herb 1 to 2 feet high, native to India. The ovate hairy leaves are 1 inch or more long, and the purple flowers, 1 inch across and with conspicuous yellow stamens, are in clusters. The very hairy fruits, $\frac{1}{4}$ inch long, lend attractiveness to the plant when flowering is past. The species has been used as a summer bedding plant in the North. For trial outside in the South and on the Pacific coast, and indoors or for bedding elsewhere. (Glenn Dale, Md.)

102908. OSBECKIA CRINITA.* From India. Presented by the Curator, Lloyd Botanic Garden, Darjeeling, through Dr. Ralph A. Fenton, Portland, Ore. A handsome branching shrub 3 to 8 feet high, with hairy leaves $1\frac{1}{2}$ to 4 inches long, and purple flowers somewhat larger than those of Osbeckia capitata. Except for the greater height of plant and the larger size of leaves and flowers, the plants of the two species are similar in appearance. This plant is abundant at altitudes between 4,000 and 8,500 feet in the mountains of Sikkim and Bhutan, India. For trial outside in the Gulf region and in southern California and indoors or as a summer bedding plant in the North. (Glenn Dale, Md.)

106451. PASSIFLORA MANICATA. Red passion-vine. From Colombia. Presented by Estacion Agricola Experimental, Palmira. A vigorous, scarlet-flowered vine that climbs to the tops of trees and blooms profusely. It is said not to thrive in green-houses. For trial in southern California. (Few plants available. (Glenn Dale, Md.)

78096. PHILADELPHUS SP.* Mock orange. From France. Obtained from E. Turbat & Co., Orleans. Variety Manteau d'Hermine (mantle of ermine). A dwarf hybrid of which one of the parents is Philadelphus microphyllus. It is a bush about 3 feet high, with double or semidouble, creamy white flowers borne on short tufted branchlets along the main branches, in such profusion as to completely cover and weigh them down. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

103487. PHLOGACANTHUS THYRSIFLORUS. Acanthaceae. From India. Collected in Bhadwar, Kangra, Punjab, at 2,000 feet altitude, by Dr. Walter Koelz, University of Michigan. Native name, Paskaka narpo. A scraggly shrub 8 feet high, with large attractive lanceolate leaves and spikes of lovely rose-madder flowers; found in deep glens along streams, but not in heavy shade. The plant prefers a rather warm damp atmosphere and a soil rich in humus. It is adapted for greenhouse culture and may be propagated by seeds or cuttings. For trial out-of-doors in the warmer parts of the Gulf and Pacific coast regions. (Glenn Dale, Md.)

78375. PILEOSTEGIA VIBURNOIDES.* Hydrangeaceae. From England. Procured from G. Reuthe, Foxhill Hardy Plant Farm, Keston, Kent. A handsome halfhardy Chinese ever-green climber, provided with aerial roots and having lanceolate-elliptic lustrous dark-green leaves 3 to 6 inches long. The small white flowers with conspicuous stamens, borne in large dense umbels, resemble those of Viburnum tinus; they come in mid-autumn, when the flowering of other shrubs is nearly past. The plant requires a moderately moist soil and does best in partial shade. It is easily propagated by cuttings in winter. For trial in the South and on the Pacific coast. (Glenn Dale, Md.)

92056. PINUS BUNGEANA.* Lacebark pine. From Manchuria. Collected by P.H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A tree sometimes 100 feet high, native to China, with the bark exfoliating in large scales, leaving whitish areas which on old trees become chalky white. It is also known as the white-barked pine. For trial in all except the warmest parts of the United States (Glenn Dale, Md.)

105620. *PITTOSPORUM* SP.* From southern China. Collected in a valley at 1,100 feet altitude in Kwangsi Province by Albert N. Steward and H. C. Cheo, University of Nanking. A small evergreen tree about 10 feet high, with obovate to elliptic acute leaves. The foliage of the young plants resembles that of *Pittosporum ferrugineum*. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

111073. *POTENTILLA GRIFFITHII*.* From India. Presented by the Lloyd Botanic Garden, Darjeeling. A tall bushy perennial, 1 to 2 feet high, with compound leaves 1 to 4 inches long, consisting of 5 to 7 leaflets, white-hairy beneath. The yellow flowers, $\frac{1}{2}$ to 1 inch across, are in loose corymbs. Native to the Sikkim Himalayas at an altitude of about 12,000 feet. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

107721. *PRIMULA* SP.* Primrose. From Bulgaria. Collected in the Rila Mountains by Dr. Edgar Anderson, Arnold Arboretum. An unidentified primula collected in an unusually dry and cold region. For trial throughout the northern states. (Glenn Dale, Md.)

105622. *PTEROCARYA STENOPTERA*. Juglandaceae. Chinese wingnut. From China. Presented by A. N. Steward, University of Nanking. A handsome ornamental tree up to 60 feet high, with pinnate leaves 6 to 12 inches long having oblong, acute leaflets 2 to 4 inches long. The long pendulous catkins when the tree is in flower or fruit add to its attractiveness. For trial on the Pacific coast and in the southern states. (Glenn Dale, Md.)

103987. *PYCNOSTACHYS URTICIFOLIA*.* Menthaceae. From Cuba. Presented by the Atkins Institution of the Arnold Arboretum, Cienfuegos. A much-branched herbaceous perennial 5 to 7 feet high, native to tropical and southern Africa. The densely pubescent ovate leaves, 3 to 4 inches long, are deeply cut into rounded lobes, and the small bright-blue flowers are in dense spikes 2 to 3 inches long. For trial in the Gulf region and the milder parts of the Pacific coast. (Glenn Dale, Md.)

107640. *RHAMNUS RUPESTRIS*. Buckthorn. From Bulgaria. Collected by Dr. Edgar Anderson of the Arnold Arboretum. A low spreading shrub 2 to 3 feet high, with hairy branchlets, ovate to orbicular dull-green leaves 1 to 2 inches long, and umbels of small fruits first red, then black. Plants grown from seeds collected in an unusually dry, cold region. For trial in the northern states. (Glenn Dale, Md.)

107641. *RHAMNUS SAXATILIS*. Buckthorn. From Bulgaria. Collected by Dr. Edgar Anderson of the Arnold Arboretum. A low, dense, very spiny shrub about 3 feet high, native to mountainous regions in central Europe and western Asia. From seeds collected in an unusually cold, dry region. For trial throughout the northern states. (Glenn Dale, Md.)

105918. *SALVIA* SP. Sage. From India. Collected at Nachar, Rampur, Bashahr, by Dr. W. Koelz, University of Michigan. An attractive herb collected on a dry slope. The leaves of the young plants are elliptical, obtuse at the apex, rugose, and thinly white-woolly beneath. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

108770. *SAMBUCUS NIGRA*. Elderberry. From Yugoslavia. Collected at Sarajevo by Edgar Anderson of the Arnold Arboretum. Seedlings of plants growing in an unusually cold, dry region. For trial in the northern states. (Supply limited.) (Glenn Dale, Md.)

105633. *SAPINDUS MUKOROSSII*. Soapberry. Collected in Kwangsi Province by Albert N. Steward and H. C. Cheo, University of Nanking. Wu Kwan Tze. Collected on a valley near Kwei Ling Hsien. A Chinese tree about 35 feet high with alternate pinnate leaves and round yellow fruits an inch in diameter. For trial in the Gulf region and in southern California. (Glenn Dale, Md.)

92760. *SARCOCOCCA SALIGNA*. From England. Obtained from Aldenham House Gardens, Elstree, Herts. An evergreen shrub 2 to 3 feet high with smooth erect stems. The smooth, glossy, narrow-lanceolate leaves, 3 to 5 inches long and over an inch wide have a long drawn-out point and a marginal vein extending all around the leaves. The greenish-white flowers are in short axillary racemes, opening in winter and spring. The small ovoid purple fruits are less than an inch long. The species is native to the Himalaya Mountains and is closely allied to *Sarcococca hookeriana*, though probably less hardy. For trial in the southern and Pacific-coast states. (Glenn Dale, Md.)

111080. *SAUSSUREA DELTOIDES*. From Colombia. Collected by Dr. W. A. Archer, Bureau of Plant Industry. An herbaceous perennial 4 to 8 feet high, with the lower leaves lyrate-pinnatifid and the upper ones triangular ovate, all sinuate, toothed, and white-tomentose beneath. The purplish flower heads, about 1 inch across, are very variable in quantity and length of peduncle. Native to the Himalaya, at altitudes of 6,000 to 11,000 feet. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

81652 and 81653. *SCHIZANDRA CHINENSIS*. Magnoliaceae. From Hokushu, Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A woody vine, native to northeastern China, with shining dark-green oval leaves and clusters of coral-colored berries. For trial throughout the northern states and the upper south. (Glenn Dale, Md.)

111085. *SELINUM TENUIFOLIUM*. From India. Received from the Lloyd Botanic Garden, Darjeeling. A highly ornamental white-flowered, Himalayan perennial with very finely divided fernlike leaves. When the plant is isolated on a lawn and now allowed to flower, the effect is very striking because of the fresh green color of the leaves. It is perfectly hardy in England. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

111799. *SENECIO* SP. Asteraceae. From India. Presented by H. A. Lee, Simla, through Dr. W. Koelz, University of Michigan. Most of the senecios have yellow flower heads and few have much horticultural value, but no details are known concerning this unidentified species. It was collected in the high Himalayas. For trial in all except the warmer parts of the United States. (Glenn Dale, Md.)

104102. *SESAMUM ANGOLENSE*. From Africa. Presented by the Director, Government Experimental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. An erect herb, possibly biennial, often 6 feet high, and native to tropical Africa. The square stems are clothed with numerous oblong to ovate, wavy-margined leaves 2 to 4 inches long. The solitary axillary flowers have brilliant violet-purple, obliquely campanulate corollas, 2 to 3 inches long. For trial more especially in the South and on the Pacific coast. (Chico, Calif.)

108772. *SILENE ROEMERI*.* From Bulgaria. Collected on Mt. Vitoska, Sofia, by Dr. E. A. Anderson of the Arnold Arboretum. A perennial alpine, from the mountains of southeastern Europe, with hairy, narrow-spatulate leaves, and small whitish flowers in headlike racemes. From seeds collected in an unusually cold, dry region. For trial in the northern states. (Glenn Dale, Md.)

21967. *SOPHORA DAVIDII*. From Chianfu, Shantung, China. Obtained by the late F. N. Meyer, agricultural explorer. A spiny leguminous shrub growing 6 to 10 feet tall, bearing small pinnate leaves, loaded with small violet-tinted whitish flowers in spring. Chinese name, Kuei tsi ching. It may be used as a hedge plant and is somewhat drought resistant. It requires pruning when grown as an ornamental in the south. For trial in all except the warmest and coldest parts of the country. (Chico, Calif.)

107642. *SPIRAEA CHAMAEDRYFOLIA ULMIFOLIA*.* From Bulgaria. Collected by Dr. Edgar Anderson of the Arnold Arboretum. A handsome erect shrub, up to 6 feet high, with ovate coarsely toothed leaves, dark green and smooth above and slightly downy beneath. The white flowers, $\frac{1}{2}$ inch across, appear in late May and are in racemes $1\frac{1}{2}$ to 2 inches long. The stamens are conspicuously long. This variety differs from the type in its slightly broader leaves and more elongated inflorescence. Native to southeastern Europe. Plants grown from seed collected in a cold dry region. For trial in all except the coldest parts of the northern states and in the upper South. (Glenn Dale, Md.)

105636. *SPIRAEA JAPONICA*.* From southern China. Collected in Kwangsi Province by A. N. Steward, University of Nanking. A shrub up to 4 feet high, with upright branches and ovate to oblong-lanceolate, doubly serrate acute leaves 1 to 4 inches long and glaucous beneath. The small pale to deep-pink flowers are in loose terminal clusters. This variety flowered in the second year from seed, when about one foot high. For trial in the southern and Pacific-coast states. (Glenn Dale, Md.)

23032. *SYRINGA MEYERI*. Meyer lilac. From China. Collected near Peking, by the late agricultural explorer, Frank N. Meyer. A compact shrub up to 10 feet high, native to northern China, with small oval-elliptic leaves and dense panicles of violet flowers, which appear very early in the season. These plants are grafted on Ligustrum amurense. For trial in the milder parts of the northern states. (Glenn Dale, Md.)

102237. *SYRINGA REFLEXA*. Nodding lilac. From France. Presented by Ecoles Forestieres des Barres, Nogent-sur-Vernisson, Loiret. A shrub 12 to 16 feet high, with rough ovate leaves 3 to 6 inches long, and nearly cylindrical drooping panicles crowded with small flowers which are deep carmine in bud, fading as the flowers open to pink outside and white within; the flowers appear in June. Native to central China. These plants are grafted on Ligustrum amurense. For trial in all but the coldest parts of the northern states. (Supply limited.) (Glenn Dale, Md.)

91833. SYRINGA TOMENTELLA. Felty lilac. From Scotland. Presented by the Royal Botanic Garden, Edinburgh. A bushy shrub, about 10 feet high, with elliptic leaves which are hairy beneath, and loose, long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China. Plants grafted on Ligustrum amurense. For trial in the milder parts of the northern states and on the Pacific coast. (Glenn Dale, Md.)

77848. SYRINGA YUNNANENSIS. Yunnan lilac. From Jamaica Plain, Mass. Collected at the Arnold Arboretum by Paul Russell, Bureau of Plant Industry. A handsome shrub of open spreading growth, related to Syringa wilsonii, but with pale-pink flowers in large panicles, produced in June. The downy leaves have a distinct red midrib, the color being continued through the leaf stalk. Native to China. Plants grafted on Ligustrum amurense. For trial in the milder parts of the northern states. (Glenn Dale, Md.)

104947. SYRINGA YUNNANENSIS. Yunnan lilac. From Germany. Presented by Direktion des Botanischen Gartens, Berlin-Dahlem. Same description as for the preceding (P. I. No. 77848). These plants are seedlings. (Supply limited.) For trial in the milder parts of the northern states. (Glenn Dale, Md.)

106906. THALICTRUM MINUS. Low meadowrue. Ranunculaceae. From Russia. Presented by Institute Botanikum, Askabad, U. S. S. R. An ornamental herbaceous perennial with leaves more or less resembling in general appearance those of the maiden-hair fern. It is useful as a rock garden plant. The species is variable and occurs in a number of named varieties, which range in height from 1 to 3 feet and in color of flower from yellow or greenish to purplish or red. It is native to Europe, Asia and northern Africa. For trial in all except the warmest parts of the United States. (Glenn Dale, Md.)

85673. THALICTRUM ROCHEBRUNIANUM. Meadowrue. From Tokyo, Japan. Collected by P.H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. An herbaceous perennial with handsome compound foliage and terminal heads of large lavender flowers, rather more showy than those of Thalictrum dipterocarpum. For trial from the Ohio River southward, and west of the Rocky Mountains. (Glenn Dale, Md.)

105164. THYMUS BRITANNICUS. From Sweden. Presented by Prof. C. Skottsberg, Botaniske Have, Göteborg. An upright, much-branched perennial about 6 inches high, beset with long hairs throughout. The lowermost leaves are small and linear, the stem leaves are elliptic and about one-half inch long. The white flowers are on long stems. Native to the Balkans. For trial in the upper south and in all but the coldest parts of the North. (Glenn Dale, Md.)

112116. ULMUS PUMILA PILOSA. Chinese elm. From China. Collected in Kwangsi Province by A. N. Steward, University of Nanking. A medium-sized tree, differing from the type (Ulmus pumila) in that the leaves and the young branchlets are hirsute or roughly pubescent. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

101207. URCEOLINA MINIATA. Amaryllidaceae. From Peru. Presented by Dr. Paul G. Ledig, Huancayo Magnetic Observatory, Carnegie Institution of Washington, D. C. A bulbous perennial, native to the Andes of Peru and Bolivia. The solid scape, 1 foot high, bears 2 to 6 urn-shaped orange-red flowers 2 inches long, after which appear the narrowly ovate leaves a foot long. For trial outside in California and the Gulf region and as a tender summer-flowering bulb elsewhere. (Glenn Dale, Md.)

108775. VACCINIUM MYRTILLUS.* From Bulgaria. Whortleberry. Collected in the Rila Mountains by Dr. E. A. Anderson of the Arnold Arboretum. A deciduous shrub, usually 6 to 12 inches high, with nearly sessile bright-green leaves about $\frac{3}{4}$ inch long. The small pinkish axillary flowers, produced in May, are followed by edible black berries with a blue bloom, $\frac{1}{2}$ inch in diameter. Grown from seeds from an unusually cold, dry region. For trial in the northern states. (Glenn Dale, Md.)

108776. VACCINIUM VITIS-IDAEA.* Mountain cranberry. Collected in the Bikar Mountains by Dr. E. A. Anderson of the Arnold Arboretum. A small bush, seldom more than 7 or 8 inches high, which grows wild in the northern regions of Europe, Asia and North America. The deep-red berries have a harsh sour taste and are a reasonable substitute for cranberries. Grown from seeds collected in an unusually cold, dry region. For trial in the northern states. (Glenn Dale, Md.)

106534. VERBASCUM LYCHNITIS. White mullein. From Bulgaria. Collected in the Rila Mountains by Dr. Edgar Anderson of the Arnold Arboretum. A biennial herb, growing to about 3 feet high, with tomentose leaves, green above and slightly hoary beneath. Flowers small, yellow or white. Plants grown from seed from the northern range of the species. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

106535. VERONICA URTICIFOLIA. From Iliina Monastery, Bulgaria. Collected by Dr. Edgar Anderson of the Arnold Arboretum. A perennial species with procumbent stems having ovate serrate sessile leaves, the upper long-acuminate. Flowers light blue or red, in loosely paniculate racemes. These plants are grown from seed from the northern range of the species. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

80410. VERONICA SP.* From France. Presented by Vilmorin-Andrieux & Co., Paris. Received under the specific name roenitzeri, for which no published description has been found. An herbaceous variety growing 12 to 18 inches high, somewhat like Veronica spicata, with erect spikes of purplish-lavender flowers. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

80411. VERONICA SP.* From France. Presented by Vilmorin-Andrieux & Co., Paris. Received under the specific name waldsteinii, for which no published description has been found. A variety growing 12 to 18 inches tall, with spikes of lavender-blue flowers. It is much like Veronica spicata, but flowers rather later. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

104603. VIOLA PATRINII.* Violet. From France. Presented by the Museum d'Histoire Naturelle, Paris. A low stemless perennial species, native to northeastern Asia, with a stout rootstock, ovate-oblong leaves and pinkish lilac flowers about one-half inch in diameter. It self-sows freely. For trial throughout the northern states. (Glenn Dale, Md.)

112380. VIOLA PATRINII.* From Germany. Presented by the Botanic Garden, Berlin. Same description as for preceding (P. I. No. 104603.) (Glenn Dale, Md.)

103900. VIOLA VIOLACEA.* Violet. From Japan. Obtained from Tanaka Boekibu, Osaka. A violet with long stolons and triangular, cordate, obtuse leaves in basal rosettes. The fragrant flowers are violet, with the spur paler violet. It is native to Japan and also to Austria. For trial throughout the cooler parts of the United States. (Glenn Dale, Md.)

105696. VITEX SP. Verbenaceae. From China. Collected in Kwangsi Province, at 3,800 feet altitude, by A. N. Steward and H. C. Cheo, University of Nanking. A tree about 10 feet high, with digitate leaves. For trial in the southern states and on the Pacific coast. (Supply very limited.) (Glenn Dale, Md.)

105331. ZELKOVA SERRATA. Ulmaceae. Sawleaf zelkova. From China. Presented by the Director, Botanic Garden, The Sun Yat Sen Tomb and Memorial Commission, Nanking. A handsome tree, native to Japan, up to 90 feet high, with a short trunk dividing into many upright spreading branches and forming a broad round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or, on the young shoots, up to 7 inches long. For trial from southern New York southward and west of the Rocky Mountains. (Glenn Dale, Md.)

106841. ZENOBIA CASSINEFOLIA.* Collected in North Carolina by Geo. M. Darrow, Bureau of Plant Industry. An ornamental deciduous shrub 3 to 6 feet high, with alternate, ovate, shallowly serrate leaves 1 to 3 inches long, and small white bell-shaped flowers in axillary clusters. Native to the pinelands of the Coastal Plain from northeastern Florida to North Carolina. For trial in the South and on the Pacific coast. (Glenn Dale, Md.)

Requests for the following two items may be made by writing
P. I. No. and plant name at the end of Bell check list.

23014. ASPARAGUS sp. From Hangchow, Chekiang, China. Collected by the late Frank N. Meyer, agricultural explorer, Bureau of Plant Industry. A very small herbaceous asparagus, attaining a height of only 3 to 5 inches. It is used as a lining along paths in small gardens and requires a shady situation. The plant endures light frosts without injury. For trial in the middle and lower south and in southern California. (Savannah, Ga.)

44401. RUBUS IRENAEUS. Presented by Aldenham House Gardens, Elstree, Herts, England. A prostrate, prickly, evergreen shrub, native to central and western China, with white flowers, large red or yellow, inedible fruits, and simple leaves suggesting those of coltsfoot. It is not known to have fruited as yet in this country. For trial in the southern half of the United States. (Savannah, Ga.)

